Abstract

A tubular reactor (2) for catalytic reactions with a heat carrier that inside a reactor jacket (10) circulates around a contact tube bundle (8), which extends between a tube plate (4; 6; 80; 82) at the reaction gas inlet side and one at the reaction gas outlet side with gas inlet and gas outlet hoods (12, 14) spanning the face sides of the two tube plates and containing reaction-inhibiting media in the zone of the tube plate on the gas inlet side, characterize themselves in that the reaction-inhibiting media consist entirely or in part of a heat insulation layer (46; 50; 64; 80) with openings for the tube cross-sections on at least one of the two sides of the respective tube plate (4; 60; 82). In this manner, either the respective tube plate (4; 60; 82) is insulated against the hot heat carrier or the reaction gas entering into the reactor is prevented from having contact with the comparatively hot tube plate in order to prevent harmful secondary reactions at the reactor inlet.